

A NEW SPECIES OF CORDIA (BORAGINACEAE) FROM PANAMA

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Santa Rita Ridge, a previously uncollected area in the Province of Colon, has yielded a new species of Cordia.

Cordia porcata Nowicke, sp. nov.

Frutex, ad ca 3 m altus, ramis junioribus pubescentibus. Folia alterna, elliptica, acuminata, integra, basibus obtusis, ad 24 cm longa et 9 cm lata, + porcata, parum falcata, + glabra cinereo-viridiaque super, sparsim pubescentia subter; petioli ca 2-10 mm longi. Inflorescentiae cymae laxae, pedunculis pubescentibus. Flores perfecti, + sessiles; gemmae clavatae; calyx cupulatus, tubo ca 4 mm longo, glaber, 3-4 lobatus, lobi deltoidei, ca 1.5-2 mm longi; corolla hypocrateriformis, alba, tubo 4-4.5 mm longo, 5-lobata, oblongis lobis ca 5 mm longis 1.8 mm latisque; stamena quinque, exserta, filis ca 3-4 mm longis ad bases pubescentibus, antheris 2 mm longis; ovarium oviforme, stylo sub anthesi ca 4 mm longo. Fructus oblique ellipsoideus, 10-12 mm altus, acuto apice.

Type: Panama: Colon: Santa Rita Ridge lumber road, 3 Oct. 1968, Correya & Dressler 1076 (Holotype: MO).

Additional collections: Panama: Colon: Santa Rita Ridge lumber rd, Correya & Dressler 742 (MO); Santa Rita Ridge, 19 km from Transisthmian Hwy, Dwyer 8581 (MO); Santa Rita Ridge, Hwy to 8 mi E, Dwyer et al. 9027 (MO).

This large and difficult genus is represented in Panama by about 16 species (for a complete treatment see Flora of Panama, part IX. Family 167, Boraginaceae, by J. W. Nowicke, Ann. Missouri Bot. Gard. 56 (1), 1969, in press). Cordia porcata is readily distinguished by its combination of open cymose inflorescences, large flowers, and relatively glabrous, grey-green leaves.

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BOOK REVIEWS

Alma L. Moldenke

"PHOTOPHYSIOLOGY - CURRENT TOPICS" Vol. III edited by Arthur C. Geise, xv & 285 pp., illus., Academic Press, Inc., New York 10003 & London W.1. 1968. \$15.00.

This rich, compact volume emphasizes plant photobiology mechanistically rather than descriptively even if the former can only be contemplated as a future acquisition. Each article is written by a leader in the field and is provided with carefully compiled bibliographic material.

John D. Spikes mentions a number of reaction mechanisms proposed to account for the still little understood photodynamic action or dye-sensitized photoautoxidations.

Robert M. Page surveys the phototropic responses that have been observed in representatives of all the major groups of fungi but not in their aquatic members and indicates some carotenoid as the possible photoreceptor.

Lester Parker and David W. Deamer, in attempting to assign a precise mechanism to the "in vivo" light-induced structural changes for which photometric evidence has been obtained, note that the main change which occurs when chloroplasts are illuminated is volume decrease.

Norman I. Krinsky develops the protective function of carotenoid pigments across the entire visible spectrum against aerobic photosensitization as a filter system in the cell envelop, as a quencher of photosensitizer triplet states, as a preferred substrate for photosensitized oxidations, and as a stabilizer and repairer of light-damaged membranes — all shown with a clever diagram.

David Branton analyzes the structure of the photosynthetic apparatus through polarization optics, X-ray diffraction analysis, electron microscopy and correlated interpretations of the ultrastructural studies, especially the photosynthetic membranes.

G. Hoch and R. S. Knox are especially interested in the resonance transfer process so essential to efficient photosynthesis and they discuss pertinent recent experiments in the context of